CHICORA TANK FARM PRELIMINARY CONTAMINATION ASSESSMENT PLAN COMMENTS

CNC CHARLESTON SC

02/23/1990

MARTIN MARIETTA ENERGY SYSTEMS, INC

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February 23, 1990

Mr. Eugene R. Batten
Southern Division, Code 11521
Naval Facilities Engineering Command
2155 Eagle Drive
P. O. Box 10068
Charleston, SC 29411-0068

Dear Mr. Batten:

Review of the Preliminary Contamination Assessment Plan for the Chicora Tank Farm, Marine Corps Air Station, Charleston, SC
Contract No. N62467-87-D-0650

The following comments address areas where further information or clarification is needed. It is recommended these comments be addressed in the revision of the report. Comments should receive a specific response from the contractor in a cover letter format. The response should indicate how the comments were addressed and where the response is incorporated into the revised document.

General Comments

1. This is a very extensive preliminary assessment. Most preliminary assessments consist of a walk through; a historical records search; and an assessment of the site geology. THANK YOU

   It is understood that previous work has been conducted (1986) to assess the site. It would be very helpful to provide a chart listing the sampling information obtained from previous work and how proposed work will compliment that information. N/A

2. The title page should list all revisions and provide all approval signatures. N/A

3. There is no discussion of the site geology or hydrogeology. ✓

4. A complete list of all deliverables must be provided. N/A

5. A listing of all regional/state EPA requirements (ARARs) must be provided. These requirements will provide rationale for choosing proper methods. N/A

6. Currently there is no discussion groundwater use. If the groundwater is a source of drinking water or migrates into a source of drinking water, a risk assessment may be necessary. N/A

7. There is no discussion of Data Quality Objectives (DQOs). The document "Sampling and Chemical Analysis Quality Assurance Requirements for the Navy Installation Restoration Program", NEESA 20.2-047B, outlines the process for defining DQOs and selecting the proper QC level. QC levels are to be defined prior to the initiation of field sampling. N/A

8. Kemron Laboratory has been identified as the laboratory to analyze all samples from the Chicora Tank Farm. Kemron has not been previously approved by the Navy. Page 7 of NEESA 20.2-047B summarizes the laboratory requirements defined by the Navy. ✓

9. A table listing all proposed samples by matrix should be included. ✓

10. Excess water generated during sampling will be properly disposed. How will excess soil be disposed? ✓

11. There is no general time line provided. This would be helpful for understanding how the events will flow. Will the tracer gas survey and the PID soil gas survey be conducted simultaneously? YES

Specific Comments

1. Page 2.1: What signature compound will be used in the tracer study? N/A

2. Is the amount of fuel product in each tank known? If not, how will a 10 ppm concentration be calculated? NO

3. Page 2.2: It is stated that boreholes will be installed according to the results of the soil gas screen. Will boring locations be selected strictly on the basis of soil gas concentrations? The sampling scheme should be designed to provide information about the extent of vertical and horizontal contamination. ✓

   Will any background samples be collected? ✓

4. Page 2.2: It is stated that groundwater wells shall be installed in each of the 11 soil boreholes. It is not clear why 11 groundwater wells would be necessary. Groundwater wells should be designed to map migration routes of contaminant. It is generally recommended that one well be installed upgradient and two or three wells be installed downgradient of the contamination source. FIXED FEE :. N/A

   If the groundwater flow is not known, it is recommended that piezometers or well points be installed to assess the hydrology. They are much more economical that groundwater wells. ✓

5. Page 2.2: Because of the possible presence of floating petroleum products, it is recommended that PVC piping and screening not be used. There is a possibility that the PVC may interact with the petroleum product. ✓

6. Page 2.3: In Section 2.2.5, it is stated that the two sampled intervals registering highest concentrations during PID analysis shall be submitted to the laboratory for analysis. Section 5.2.2 states that laboratory samples will be obtained based on their vertical depth. These two sections are in disagreement; therefore, the text should be modified. It is recommended that samples be collected based on location.

7. Page 2.3: How were methods selected? Methods 8100 and 8020 can be used on both soil and water samples. It is not clear why water samples are to be analyzed by the 600 series methods. 10.6H

8. Page 2.3: Wells are usually developed and purged until groundwater pH, temperature, and conductivity have stabilized. The work plan should define stabilization criteria.

9. Page 2.3: The plan should approximate how many surface water samples will be taken.

   Is there ready access to the French Drains below the fuel tanks? NO

10. Page 2.3: There is no discussion of the methods to be used for analyzing soil gas samples for tracer compounds. A method must be specified. N/A

    The GC to be used should be identified. Will it be a portable GC or a laboratory-type GC equipped in a mobile laboratory? What are the instrument operating parameters? N/A

11. Will samples be quantitated for the indicator compound only? N/A

12. Page 5.2: It is recommended that methanol be used for equipment contamination. Isopropanol may break down to acetone in the presence of sunlight. ✓

13. Page 5.2, Item 7: All equipment coming into contact with samples should be rinsed with ASTM Type II water or equivalent. Documentation of water and solvent purity should be maintained and traceable by lot number. N/A

14. Page 5.2: The discussion of field blanks is in disagreement with the definition and use stated in NEESA 20.2-047B (p. 20). A field blank is a check of the source of water used in decontamination and steam cleaning. One field blank from each event and each source of water must be collected and analyzed for the target analytes. It is not designed as a check on the laboratory. BS

15. Page 5.7: There is no discussion of calibration procedures for the GC - ECD to be used in the field. Calibration and quality control criteria must be specified.

16. Page 5.7: Data validation must be independent of the analytical laboratory. The laboratory is responsible for reviewing data, but the actual validation must be conducted independently of the laboratory.

17. Page 5.8: Audits are to be performed within the laboratory. Are any field audits proposed? What about for field analysis of the tracer soil gas?

Sincerely,

Marilew H. Bartling
Project Manager

MHB:mpl

cc: M. H. Bartling
G. T. Lionelli, NEESA
N. A. Luedtke
M. Williams, Southern Division
Letter File
Project File - RC